# CINT2000 Result

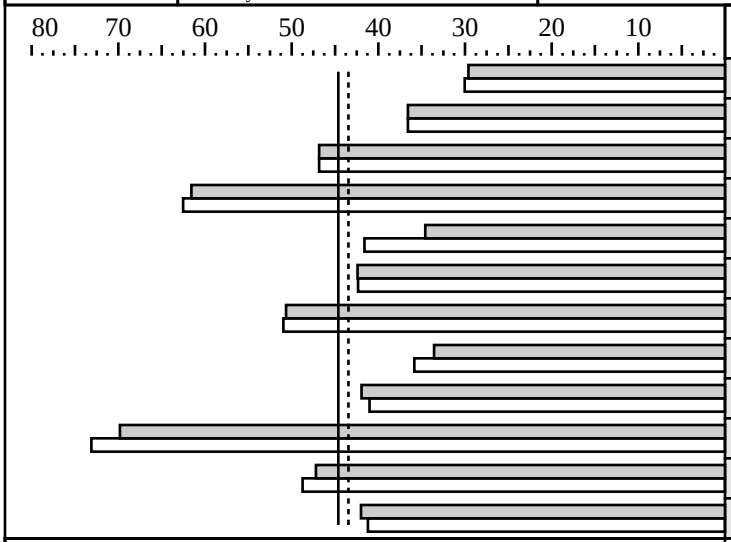


## IBM Corporation
## IBM System p5 505 (2100 MHz, 2 CPU)

SPECint_rate2000 = 44.6

SPECint_rate_base2000 = 43.4

SPEC license #: 11 | Tested by: IBM Austin | Test date: Jun-2006 | Hardware Avail: Aug-2006 | Software Avail: Aug-2006




| Benchmark | Base Copies | Base Runtime | Base Ratio | Copies | Runtime | Ratio |
|---|---|---|---|---|---|---|
| 164.gzip | 4 | 219 | 29.6 | 4 | 216 | 30.0 |
| 175.vpr | 4 | 178 | 36.6 | 4 | 178 | 36.6 |
| 176.gcc | 4 | 109 | 46.8 | 4 | 109 | 46.8 |
| 181.mcf | 4 | 136 | 61.6 | 4 | 134 | 62.5 |
| 186.crafty | 4 | 134 | 34.6 | 4 | 112 | 41.6 |
| 197.parser | 4 | 197 | 42.4 | 4 | 197 | 42.4 |
| 252.eon | 4 | 119 | 50.6 | 4 | 118 | 50.9 |
| 253.perlbmk | 4 | 249 | 33.6 | 4 | 233 | 35.8 |
| 254.gap | 4 | 122 | 41.9 | 4 | 124 | 41.0 |
| 255.vortex | 4 | 126 | 69.8 | 4 | 121 | 73.1 |
| 256.bzip2 | 4 | 147 | 47.2 | 4 | 143 | 48.7 |
| 300.twolf | 4 | 332 | 42.0 | 4 | 338 | 41.2 |

### Hardware

| | |
|---|---|
| CPU: | POWER5+ |
| CPU MHz: | 2100 |
| FPU: | Integrated |
| CPU(s) enabled: | 2 cores, 1 chip, 2 cores/chip (SMT on) |
| CPU(s) orderable: | 2 core |
| Parallel: | No |
| Primary Cache: | 64 KB I + 32 KB D on chip per core |
| Secondary Cache: | 1920 KB I+D on chip per chip |
| L3 Cache: | 36 MB I+D off chip per chip, 1 chip per SUT |
| Other Cache: | None |
| Memory: | 16 GB (8x2 GB) |
| Disk Subsystem: | 1x73GB SCSI, 15K RPM |
| Other Hardware: | None |

### Software

| | |
|---|---|
| Operating System: | AIX 5L V5.3 |
| Compiler: | XL C/C++ Enterprise Edition Version 8.0 for AIX<br>XL Fortran Enterprise Edition Version 10.1 for AIX<br>Other Software: ESSL 4.2.0.4 |
| File System: | AIX/JFS2 |
| System State: | Multi-user |

## Notes/Tuning Information

```
Portability Flags:
  176.gcc:       -ma -DHOST_WORDS_BIG_ENDIAN
  186.crafty:    -DAIX
  253.perlbmk:   -DSPEC_CPU2000_AIX
  254.gap:       -DSYS_IS_BSD -DSYS_STRING_H
                 -DSYS_HAS_MALLOC_PROTO -DSYS_HAS_CALLOC_PROTO
  300.twolf:     -DHAVE_SIGNED_CHAR

Base Optimization Flags:
  C:    -qpdf1/pdf2
        -O5 -blpdata -D_ILS_MACROS
  C++:  -qpdf1/pdf2
        -O4 -qalign=natural

Peak Optimization Flags
  164.gzip:      -qpdf1/pdf2
                 -O4 -qfdpr -blpdata
                 fdpr -q -O3
  175.vpr:       basepeak=1
  176.gcc:       basepeak=1
```

## Notes/Tuning Information (Continued)

```
  181.mcf:      -qpdf1/pdf2
                -O5 -blpdata -qalign=natural -qhot=arraypad -qfdpr -Q -qmaxmem=-1
                fdpr -q -O3
  186.crafty:   -qpdf1/pdf2
                -O4 -qalign=natural -q64 -lhmu -blpdata
  197.parser:   -qpdf1/pdf2
                -O4 -qfdpr -D_ILS_MACROS -blpdata
                fdpr -q -O3
  252.eon:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural
  253.perlbmk:  -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata -lhmu
  254.gap:      -qpdf1/pdf2
                -O4 -qarch=pwr4 -qtune=pwr4 -qalign=natural -blpdata
  255.vortex:   -qpdf1/pdf2
                -O4 -qfdpr -lhmu -blpdata
                fdpr -q -O3
  256.bzip2:    -qpdf1/pdf2
                -O5 -qfdpr -blpdata
                fdpr -q -O3
  300.twolf:    -O5 -qfdpr -blpdata
                fdpr -q -O3


The installed OS level is AIX 5L for POWER Version 5.3 with the 5300-05 Recommended Technology Level.
The installed C/C++ compiler is XL C/C++ Enterprise Edition Version 8.0 for AIX.
The installed Fortran copiler is XL Fortran Enterprise Edition Version 10.1 with the May 2006 AIX PTF.

SMT:  Acronym for "Simultaneous Multi-Threading". A processor technology that allows
      the simultaneous execution of multiple thread contexts within a single processor
      core. (Enabled by default)
SUT:  Acronym for "System Under Test"
PTF:  IBM identifier for "Program Fix Level"

Extended C:     IBM XL C for AIX invoked as cc
ANSI C89:       IBM XL C for AIX invoked as xlc
C++:            IBM XL C for AIX invoked as xlC

ulimits set to unlimited.
Large page mode and memory affinity were set as follows:
    vmo -r -o lgpg_regions=512 -o lgpg_size=16777216
    chuser capabilities=CAP_BYPASS_RAC_VMM,CAP_PROPAGATE $USER
    bosboot -aD
    shutdown -rF
    export MEMORY_AFFINITY=MCM

The following config-file entry was used to assign each benchmark process to a core:
     submit = bindprocessor \$\$ \$SPECUSERNUM; $command
The "bindprocessor" AIX command binds a process to a CPU core.

This result was measured on an IBM System p5 510. IBM System p5 505 and IBM System
p5 510 (2-core version) are electronically equivalent.
```